1-1-1972

Keep it Cool

Purdue University Cooperative Extension Service

A bulk tank should be able to cool milk down to 40°F. within 2 hours. Failure to do so may signal the following problems:

- 1. The cooling unit is low on refrigerant.
- 2. Air movement is restricted around condenser coils (probably because the coils are covered with dust, the fan belt is slipping or miscellaneous objects are obstructing circulation).
- 3. The compressor is too small. Tanks designed for 48-hour storage have only 50% of the refrigeration capacity of tanks designed for 24-hour storage. This fact is often overlooked when buying a new or used tank. Be sure your purchase agreement includes a statement of the tank's rated cooling capacity.
- 4. The compressor safety switch will be activated before cooling is complete when head pressure is too high. If this happens, check for restricted air movement (item 2), then call your refrigeration service man.

Check frequently the accuracy of your bulk tank thermometer.

Whether the recording type (now required in some markets) or the common dial type, your tank thermometer must be routinely checked with a thermometer of known accuracy. Procurement drivers are supposed to carry a dependable thermometer for checking milk tank temperatures. All recording types and some dial types can be adjusted.

Cooperative Extension Work in Agriculture and Home Economics, State of Indiana, Purdue University and U. S. Department of Agriculture Cooperating. H. G. Diesslin, Director, Lafayette, Ind. Issued in furtherance of the Acts of May 8 and June 30, 1914.

Once your milk has been cooled, keep it that way! Milk that has been cooled to 40°F. then allowed to warm to over 50°F. may develop rancidity as well as increase in bacterial count.

It's important that you clean and sanitize your bulk tank every day. Here's how.

- 1. Preflush with plenty of cold water immediately following milk pickup.
- 2. Make up the washing solution at the proper concentration and proper temperature. Use a plastic pail to avoid scratching the tank and follow in detail the directions on the cleaner package. Mixing the cleaning solution in the tank itself will both waste material or mean inaccurate cleaning concentrations.
- 3. Scrub all of the inside surface of the tank (outlet valve closed), as well as the agitator, agitator tank shaft bearing, inside covers and cover bridge. Then drain the solution into the wash pail and wash the outlet valve. Finally, use the same solution to wash the outside of the tank.
- 4. Rinse thoroughly with clean tap water. Then spray the tank surface with a weak solution of an organic acid to prevent milk stone deposits. Close the tank lids and let the tank drain until just before the next milking.
- 5. Sanitize. Follow package directions. Do not rinse with tap water after sanitizing. Assemble the outlet valve and replace the valve cap.

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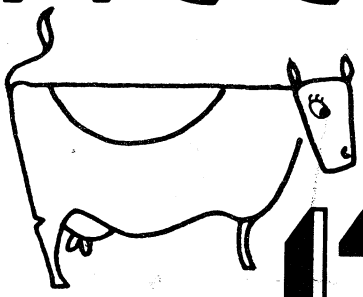
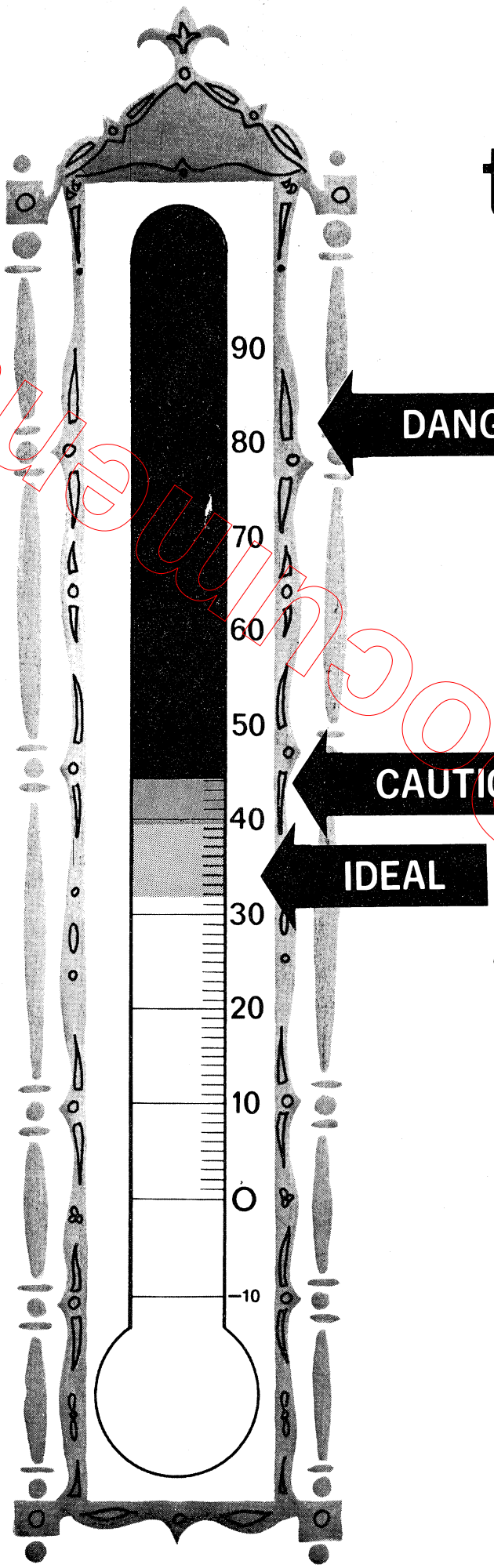
1972

KEEP IT COOL



Cooperative Extension Service,
Purdue University, Lafayette, Indiana

temperature guide for milk producers



- Cool milk to 40 F. within 2 hours after milking. A longer cooling time indicates equipment malfunction.
- Milk storage temperatures above 40 F. may mean high bacteria counts and rancid flavor.
- Regularly check the accuracy of your bulk tank thermometer.
- In case of bulk tank refrigeration failure, notify your fieldman or milk plant —immediately.
- Check with your milk sanitarian if planning any milk room remodeling or expansion.